

REMARKS

There remains pending in this application claims 1-11, of which claims 1 and 11 are independent. No claims have been added or cancelled.

In view of the above amendments and the following remarks, favorable reconsideration and allowance of the above application is respectfully sought.

Initially, Applicants have amended each of claims 1, 10 and 11 to address the rejection under 35 U.S.C. § 112, second paragraph. As such, withdrawal of those rejections is respectfully sought.

In making the above amendments, Applicants have also eliminated means plus function phraseology, thereby now referring directly the apparatus in the apparatus claims and the method step in the method claims. Such changes are believed to in no way affect the basis upon which Applicants submit the above claims are patentable over the applied art of record.

Applicants' invention as set forth in independent claim 1 is directed to a sheet material identifying apparatus for identifying the kind of a sheet material. The apparatus has an adjusting assembly for dehumidifying or humidifying a predetermined region of the sheet material and adjusting the moisture content of the predetermined region, an external force applying unit for applying an external force to the predetermined region of the sheet material whose moisture content is adjusted, a detecting unit for detecting the external force propagated through the sheet while the external force is applied by the external force applying unit, and an identifying unit which uses a detection result of the detection unit for identifying the kind of a sheet material.

Independent claim 11 is directed to a sheet material identifying method which incorporates the salient features of the invention as set forth in claim 1.

Each of claims 1-11 stands rejected under 35 U.S.C. § 102(a) as being anticipated by European Publication No. EP 1286156 (Nojiri et al.) In view of the above amendments and the following remarks, those rejections are respectfully traversed.

Applicants' invention as set forth in each of the pending claims of the above application, provides for a method or apparatus which is able to more precisely determine the type of material in use. In accordance with this apparatus or method, the moisture content of the sheet material is initially adjusted and only after the moisture content of the sheet material is adjusted, is an external force applied to the sheet material to determine the type of sheet material being used.

By way of example, the present specification sets forth various possible adjusting units on pages 9, line 24, through page 11, line 12. As noted therein, when a heat fixing device is used, the dehumidifying is conducted by using such heat generating during the image forming process. Alternately, ink ejection can be utilized for humidification in an ink jet type printing apparatus. In either case, adjusting a moisture content of the sheet material is affected before the external force is applied.

Nojiri et al. is directed to a device for analysis of a sheet material and includes both an impact applying unit applying an impact to a sheet and a detection unit outputting a signal resulting from that input. The Office Action identifies the third embodiment of that reference, and particularly paragraph 0142, as disclosing the adjusting assembly or adjusting step as set forth in the claims of the present application. As set forth in that paragraph, there is control of the amount of ink to be discharged as well as the temperature conditions at the time of fixing the toner. However in Nojiri et al., such adjustments are conducted after in a determination of the

kind of sheet material has been performed. More specifically, in Nojiri et al., it is as a result of the determination of the kind of sheet material, that the temperature condition and ink ejection amount are adjusted so as to be optimal for the type of sheet material being used.

Accordingly, Nojiri et al. does not use the heat fixing device or ink jet transferring device for dehumidifying or humidifying as is done in the present invention prior to and to improve the precision of determining the kind of sheet material being used. Thus, Nojiri et al. does not disclose that the moisture content of a sheet material is adjusted with a moisture content adjusting unit and then an external force is applied to the sheet material whose moisture content has been adjusted, thereby determining the kind of sheet material. Nor does Nojiri et al. make any teaching or suggestion of the significance or importance of adjusting the humidity of the sheet material prior to making the determination of the type of sheet material being analyzed.

For the foregoing reasons, Applicants respectfully submit that each of the independent claims 1 and 11 is patentable over the applied art of record. The remaining claims in the above application are dependent claims which depend either directly or indirectly from claim 1 or claim 7 and are therefore patentable over the art of record for reasons noted above with respect to claim 1 or claim 7. In addition, each recite features of the invention still further distinguishing it from the applied art. Favorable and independent consideration thereof is respectfully sought.

Applicants respectfully submit that all outstanding matters in the above application have been addressed and that this application is in condition for allowance. Favorable reconsideration and early passage to issue of the above application is respectfully sought.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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